

AMENDMENTS TO THE CLAIMS

1.-19. (Canceled).

20. (Currently Amended) A method according to ~~claim 19~~claim 52, wherein the handwritten information ~~defined by a hand movement~~ comprises characters and further comprising identifying the characters with the aid of the description and storing them in character-coded digital format.

21.-22. (Canceled).

23. (Currently Amended) A method according to ~~claim 19~~claim 52, further comprising displaying the handwritten information based on ~~the said~~ description ~~of how the device has been moved~~.

24. (Currently Amended) A method according to ~~claim 19~~claim 52, further comprising determining, on the basis of the partially overlapping contents of the images, the speed at which the device has been moved between the recording of two images.

25. (Previously Presented) A method according to claim 24, further comprising comparing the speed with pre-recorded speed data for checking the authenticity of the handwritten information.

26. (Currently Amended) A method according to ~~claim 19~~claim 52, further comprising indicating on the surface the movement of the device.

27. (Currently Amended) A method according to ~~claim 19~~claim 52, further comprising recording pre-existing information on an information carrier by imaging the information with the aid of a plurality of images with partially overlapping contents.

28. (Previously Presented) A method according to claim 27, further comprising adjusting the device from a first operational mode for recording the handwritten information to a second operational mode for recording the pre-existing information.

29.-30. (Canceled).

31. (Currently Amended) A device according to ~~claim 30~~claim 60, wherein said description comprises a plurality of movement vectors each indicating how the ~~recorder~~ imaging device has been moved between said pair of ~~the recording of two~~ images.

32. (Currently Amended) A device according to ~~claim 30~~claim 60, wherein said description comprises turning indications, each indicating how the imaging device ~~recorder~~ has been turned between said pair of ~~the recording of two~~ images.

33. (Currently Amended) A device according to ~~claim 30~~claim 60, wherein said device is ~~adapted~~ configured to determine, on the basis of the partially overlapping contents of the images, the speed at which the imaging device ~~recorder~~ has been moved between ~~the recording of two~~ said pair of images.

34. (Currently Amended) A device according to claim 33, wherein said device is ~~adapted~~ configured to compare the speed with pre-recorded speed data for checking the authenticity of the inputted information.

35. (Currently Amended) A device according to ~~claim 30~~ claim 60, wherein the ~~hand-written~~ handwritten information comprises characters and wherein the ~~image-processor~~ image processor is further ~~adapted~~ configured to identify the characters with the aid of ~~the said description in digital format~~ and to store the identified characters in character-coded format.

36. (Canceled).

37. (Currently Amended) A device according to ~~claim 36~~ claim 60, wherein said ~~image-processor~~ image processor is ~~adapted~~ configured to determine the relative shift position of the images both horizontally and vertically.

38. (Canceled).

39. (Currently Amended) A device according to ~~claim 30~~ claim 60, further comprising a tracer for indicating on the surface the movement of the ~~recorder~~ imaging device.

40. (Previously Presented) A device according to claim 39, wherein the tracer comprises an illuminator which projects light onto the surface.

41. (Currently Amended) A device according to ~~claim 30~~ claim 60, wherein the imaging device and the image processor ~~recorder and the image processor~~ are arranged

in a common casing which is ~~adapted~~ configured to be moved by the hand carrying out the hand movement.

42. (Currently Amended) A device according to ~~claim 30~~ claim 60, wherein the imaging device recorder is arranged in a first casing and the ~~image processor~~ image processor in a second casing.

43. (Canceled).

44. (Currently Amended) A device according to ~~claim 30~~ claim 60, wherein said device is adjustable to an operational mode in which it is ~~adapted~~ configured to record predefined information located on an information carrier, by imaging the information with the aid of a plurality of images with partially overlapping contents.

45. (Currently Amended) A device according to ~~claim 30~~ claim 60, wherein said device is adjustable to an operational mode in which it is ~~adapted~~ configured to image an object located at a distance from the device.

46. (Canceled).

47. (Currently Amended) A device according to ~~claim 30~~ claim 60, further comprising a display for reproducing the ~~hand-written~~ handwritten information based on the said description of how the recorder has been moved.

48.-51. (Canceled).

52. (Currently Amended) A method of recording handwritten information

defined by a hand movement, said method comprising ~~the steps of:~~

providing a surface having a preexisting pattern;

providing an imaging device;

moving the imaging device with a hand which is carrying out the hand movement relative to the surface while recording with the imaging device a plurality of images of the preexisting pattern with partially overlapping contents;

~~determining the relative positions of the images with the aid of the partially overlapping contents; comparing said images in pairs to determine, with the aid of the partially overlapping contents, a relative shift of the preexisting pattern between each pair of images; and~~

providing a description in digital format of how the imaging device has been moved over the surface based at least in part on the thus-determined relative shifts ~~relative positions of the preexisting pattern in the partially overlapping images.~~

53. (Currently Amended) The method ~~of according to~~ claim 52, further comprising including the additional step of storing the hand-written ~~handwritten~~ information by storing the said ~~description of how the device has been moved.~~

54. (Currently Amended) The method ~~of according to~~ claim 52, wherein said comparing step of determining the relative positions of the images in pairs is performed in parallel with said ~~step of~~ providing a description in digital format.

55.-59. (Canceled).

60. (Currently Amended) A device for recording handwritten information defined by a hand movement, comprising:

an imaging device ~~adapted~~ configured to be moved by a hand which carries out

the hand movement and to record a plurality of images with partially overlapping contents of a surface having a preexisting pattern while the imaging device is being moved; and

an image processor ~~adapted configured to determine compare said the relative positions of the preexisting pattern in the images in pairs to determine,~~ with the aid of the partially overlapping contents, a relative shift of the preexisting pattern between each pair of images and to provide a description in digital format of how the imaging device has been moved over the surface based at least partially on the thus-determined relative shifts~~relative positions of the preexisting pattern in the partially overlapping images.~~

61. (New) A device according to claim 60, wherein the imaging device comprises a controller, a light-sensitive sensor with a two-dimensional sensor surface for recording the images, and a light source, said controller selectively activating the light source to illuminate said surface while said light-sensitive sensor is being controlled to capture images of the thus-illuminated surface.

62. (New) A device according to claim 61, wherein said controller selectively activates the light source to strobe at a predetermined frequency.

63. (New) A device according to claim 60, wherein the image processor is configured to store said description in a memory.

64. (New) A device according to claim 63, which is configured to selectively derive said description from the memory and operate a transceiver to transfer said description to an external device.

65. (New) A device according to claim 64, wherein the transceiver is configured for wireless communication with the external device.

66. (New) A device according to claim 60, further comprising a pen tip for generating permanent marks on said surface, said marks being undetectable to said imaging device.

67. (New) A device according to claim 60, further comprising a pen tip for generating permanent marks on said surface, said device being configured to exclude said marks from said images.

68. (New) A device according to claim 60, wherein said preexisting pattern includes graphics printed on the surface.

69. (New) A device according to claim 60, wherein the imaging device comprises a lens system with automatic focus control.

70. (New) A device according to claim 60, wherein the image processor is configured to evaluate every possible candidate shift between said pair of images.

71. (New) A device according to claim 60, wherein the image processor is configured to evaluate, based on a plurality of element values for each image, different candidate shifts between said pair of images by:

applying said candidate shifts to one image with respect to the other image in said pair of images;

effecting, for each candidate shift, a comparison of each element value of said one image and an overlapping element value of said other image; and

when the comparison fulfills a predetermined criterion, selectively updating a match rate value for the candidate shift.

72. (New) A device according to claim 71, wherein the image processor is configured to determine said relative shift as the candidate shift that has an optimum match rate value.

73. (New) A method according to claim 52, wherein the imaging device comprises a light-sensitive sensor with a two-dimensional sensor surface for recording the images, and a light source, further comprising selectively activating the light source to illuminate said surface while controlling said light-sensitive sensor to capture images of the thus-illuminated surface.

74. (New) A method according to claim 73, further comprising selectively activating the light source to strobe at a predetermined frequency.

75. (New) A method according to claim 52, further comprising selectively operating a transceiver to transfer said description to an external device.

76. (New) A method according to claim 75, wherein the transceiver communicates wirelessly with the external device.

77. (New) A method according to claim 52, further comprising operating a pen tip connected to the imaging device to generate permanent marks on said surface, said marks being undetectable to said imaging device.



78. (New) A method according to claim 52, further comprising operating a pen tip connected to the imaging device to generate permanent marks on said surface, such that said marks are excluded from said images.

79. (New) A method according to claim 52, wherein said preexisting pattern includes graphics printed on the surface.

80. (New) A method according to claim 52, wherein said comparing said images in pairs comprises evaluating every possible candidate shift between said pair of images.

81. (New) A method according to claim 52, wherein said comparing said images in pairs comprises evaluating, based on a plurality of element values for each image, different candidate shifts between said pair of images by:

applying said candidate shifts to one image with respect to the other image in said pair of images;

effecting, for each candidate shift, a comparison of each element value of said one image and an overlapping element value of said other image; and

when the comparison fulfills a predetermined criterion, selectively updating a match rate value for the candidate shift.

82. (New) A method according to claim 81, wherein said comparing said images in pairs further comprises determining said relative shift as the candidate shift that has an optimum match rate value.